

THE RUDDER

Sailings of the U.S. Navy Medical Service Corps



SPECIALTY SPOTLIGHT

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Analysis

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Mar 2023
Volume 11, Issue 3

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Cover image. Garmisch, Germany. Pictured (L-R): Navy Aerospace Optometrists, LCDR Micah Kinney and LCDR Adam Preston, are two members of the planning team that organized an international operational vision panel held during the NATO-Ramstein Aerospace Medicine Summit in March 2023. Fellow MSC planning members not pictured are LCDR Brennan Cox and LT Alexandra Kaplan, both Aerospace Experimental Psychologists. See p. 26 for more.

FROM THE MSC DIRECTOR

Greetings from the MSC Office. Since our last edition we had to bid farewell to Rear Admiral Gillingham, our 39th Navy Surgeon General. It was an honor to pass his flag during his retirement ceremony and I wish him well as he and his family embark on their next great adventure. Prior to my current position, I had the pleasure to serve with him as his Executive Assistant. I was given a daily lesson on how a servant leader operates, he was an incredibly insightful and caring leader. In addition to passing the flag, I was also honored to make him an honorary Ensign in the Medical Service Corps after he spoke at our 75th Anniversary Ball in DC last year. Fair Winds and Following Seas to our SG and Ensign!



The Specialty in the Spotlight this month is Operations Research Analysis led by the Specialty Leader, LCDR Andrew Olson. There are 10 Operations Research Analysis officers in the Medical Service Corps and they fill critical roles that directly affect the data-driven decisions made by senior leaders.

I am thrilled to share the Medical Service Corps FY23 to FY28 Strategy Map. The efforts from our Specialty Leader Business meeting combined with our Strategic Goal Groups continue to codify the MSC Strategy for FY23 and FY24 and organize priorities under three key categories: Ready, Aligned, and Diverse.

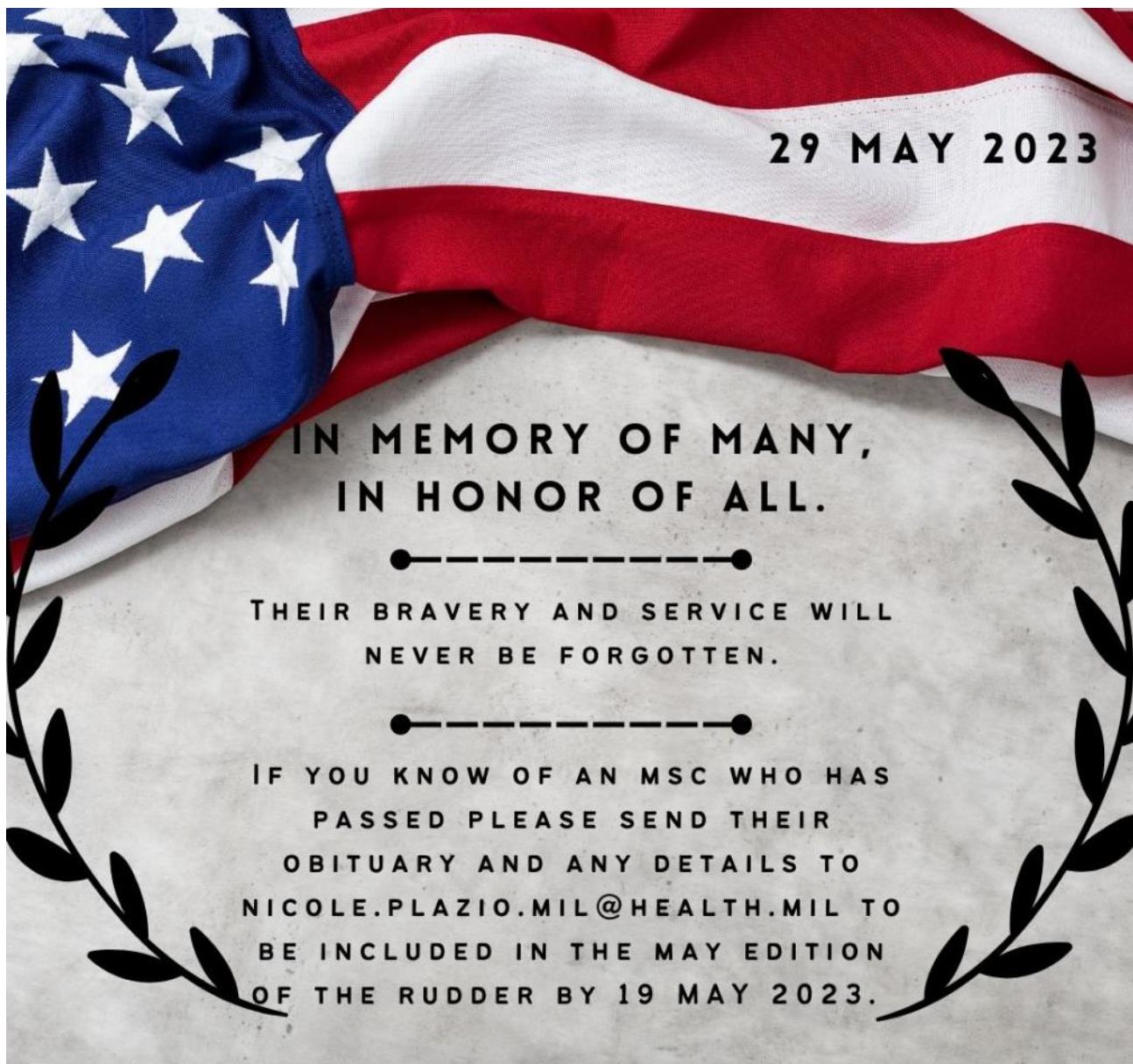
Congratulations to the three audiologists who were recognized by the Military Audiology Association. Bravo Zulu, LT AJ Litwinchuk, LCDR Krystal Rapp, and CDR Joel Bealer for your accomplishments. CDR Goiran, I hope each day brings a little more strength, determina-

tion, and healing. I truly admire your positive outlook and I appreciate your willingness to share your journey with the Corps.

Thanks again for all that you do every day to support our Navy Medicine mission and take care of each other. I am honored to represent you as the MSC Director and looking forward to seeing you all.

M. Case #20

M. CASE
Rear Admiral, Medical Service Corps
United States Navy
Director, Medical Service Corps



CORPS CHIEF'S OFFICE

SPECIALTY LEADER UPDATE



Outgoing Occupational Therapy
Specialty Leader
CDR Melissa Parkes
(210) 808-5953
Melissa.K.Parkes.MIL@Health.MIL



Thank you to CDR Melissa Parkes for serving diligently as the Occupational Therapy Specialty Leader. We greatly appreciate your commitment and dedication to our mission. We value the effort you put forth to elevate the Medical Service Corps.

We welcome aboard LCDR John Balsamo. Congratulations on your selection as the next Occupational Therapy Specialty Leader!



New Occupational Therapy Specialty Leader
LCDR John Balsamo
(314) 629-6618
John.L.Balsamo2.MIL@Health.MIL



Outgoing Physician Assistant
Specialty Leader
CDR Christopher Owston
(757) 763-2178
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Click [here](#) to access the full Specialty Leader and Assistant Specialty Leader Directory located on the MSC milSuite page.

Medical Service Corps

Specialty Leaders & Assist. Specialty Leaders Directory

UNITED STATES NAVY

Version Date: 18 April 2023

This document is complete with hyperlinks to assist with navigation throughout the document. You may need to hold "Ctrl" and click on the links for it to function. Each page has a link in the bottom right corner to the "Table of Contents."

Thank you to CDR Christopher Owston for serving selflessly as the Physician Assistant Specialty Leader. Please accept our sincere gratitude for the time and effort you put forth to enhance our Corps.

We welcome aboard CDR Carl Long. Congratulations on your selection as the next Physician Assistant Specialty Leader!



New Physician Assistant Specialty Leader
CDR Carl Long
(910) 951-4395
LONGC@SOCOM.MIL

CORPS CHIEF'S OFFICE

CDB PROGRAM MANAGEMENT UPDATE



Outgoing CDB Program Manager
LCDR Erica Harris
(843) 794-8369
ERICA.R.HARRIS9.MIL@US.NAVY.MIL



Thank you to LCDR Harris for serving diligently as the Career Development Board Program Manager. We are grateful for your commitment to our mission and the dedication you put forth in guiding countless MSC officers. Your efforts are truly appreciated.

We welcome aboard LCDR Albert Lee. Congratulations on your selection as the next Career Development Board Program Manager. LCDR Lee is currently stationed at Naval Special Warfare Group 8 Training Detachment in Hawaii as a Physical Therapist.



New CDB Program Manager
LCDR Albert Lee
(808) 474-2527
ALBERT.J.LEE.MIL@SOCOM.MIL



Outgoing Assistant CDB Program Manager
 LCDR Larry Middleton, Jr.
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LARRY.MIDDLETON2.MIL@HEALTH.MIL

Click [here](#) to access the MSC Career Development (CDB) Program website on milSuite.

MEDICAL SERVICE CORPS CAREER DEVELOPMENT

Thank you to LCDR Larry Middleton for serving as the Assistant Career Development Board Program Manager. Your devotion to the mission positively impacted so many MSC officers seeking career progression.

We welcome aboard LT Salassi. Congratulations on your selection as the next Assistant Career Development Board Program Manager. LT Salassi is currently stationed at the Marine Corps Air Station Iwakuni, Japan as the Aeromedical Safety Officer for Carrier Air Wing FIVE.



New Assistant CDB Program Manager
 LT James Salassi
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CORPS CHIEF'S OFFICE

RADM BRUCE GILLINGHAM RETIRES AFTER 40 YEARS OF DEDICATED SERVICE

Bethesda, Md. Pictured right (L-R): RADM Bruce Gillingham salutes the American flag as RDML Matthew Case presents the flag during a flag folding ceremony for RADM Gillingham's retirement ceremony on 27 March 2023 at the Uniformed Services University.



Bethesda, Md. Pictured left: RADM Bruce Gillingham, the Navy's 39th Surgeon General, celebrates the culmination of 40 years of active-duty service at a retirement ceremony at the Uniformed Services University on 27 March 2023.

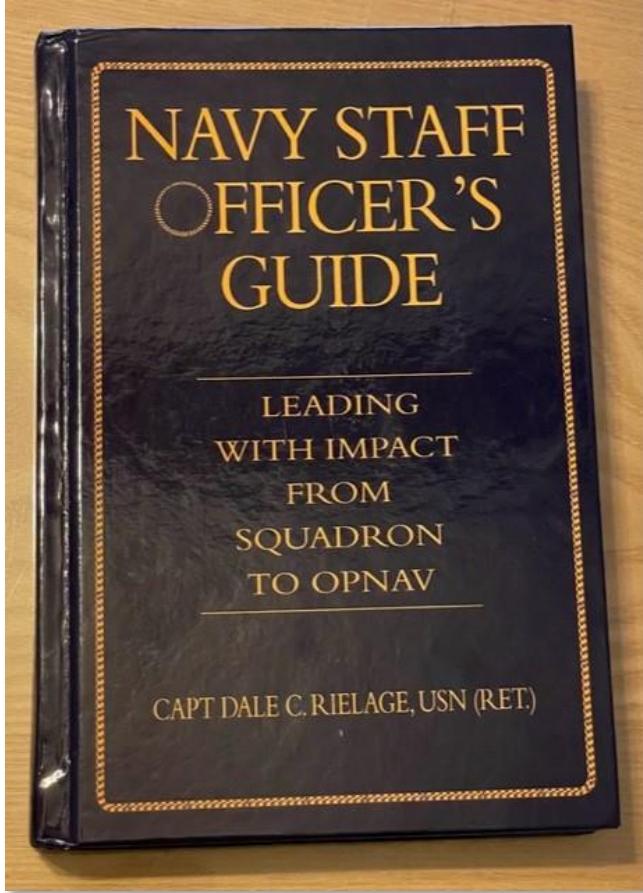


Bethesda, Md. Several MSC officers who participated in and/or attended RADM Bruce Gillingham's retirement ceremony on 27 March 2023 include (top left photo) CAPT Marcy Morlock, Deputy Executive Assistant to the Navy Surgeon General; (top right photo) LT Julio Menendez, Flag Aide to the Deputy Surgeon General; and (bottom left photo) CDR Rodel Divina, Navy Medicine SAPR Officer and Sexual Assault Medical Forensic Exam Program Director. Additionally, (bottom right photo) CDR Kelly Mokay, Deputy Medical Program Accessions; CAPT Rona Green, Executive Officer of NMRTC Guantanamo Bay; LCDR Adrain Felder, Flag Aide to the Navy Surgeon General, and LCDR Aaron Eckard, Assistant Director for Administration at NMRTC Portsmouth, are seen serving as sideboys. Also, (middle right photo) RADM Gillingham is seen reuniting with members and a patient of the Surgical Shock Trauma Platoon where he served as Officer in Charge from August to March 2005 in Taqaddum, Iraq; he and his surgical team played an instrumental role in providing frontline surgical care during the Second Battle of Fallujah (Operation Phantom Fury).

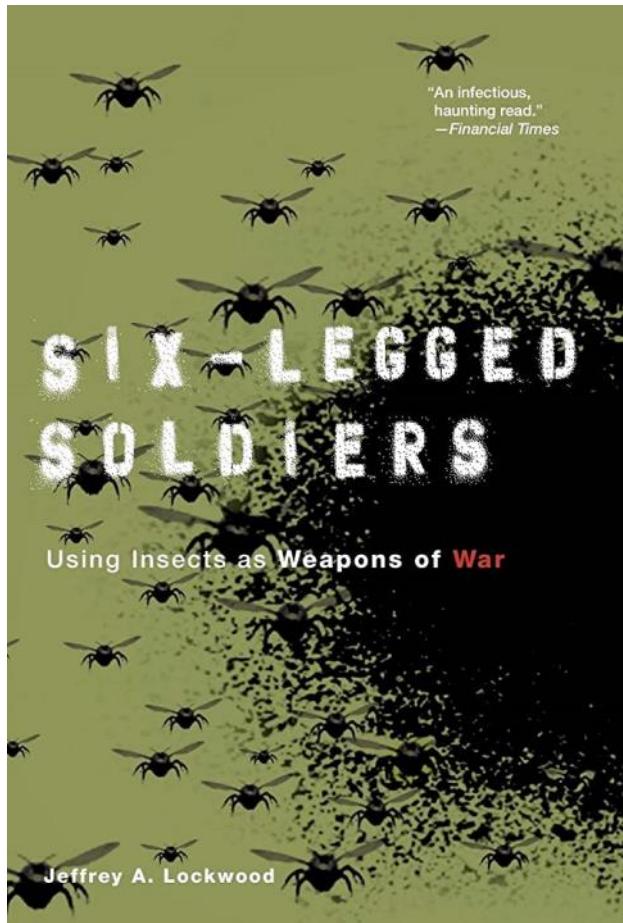
THE CORPS CHIEF'S BOOK CLUB

Navy Staff Officer's Guide by CAPT Dale C. Rielage, USN (Retired)

Recommended by: LT Emil T. Cuadrado, HCA



Summary: Navy Staff Officer's Guide – Leading With Impact From Squadron to OPNAV by CAPT Dale C. Rielage, USN (Retired), equips Naval leaders for success in the challenging environment of a Navy staff. At the most fundamental level, staff work is an administrative structure designed to help a commander carry out the responsibilities of command. As Medical Service Corps officers, part of the Staff Corps community, we are often heavily relied on to do the staff work that sets the conditions for victory. This guide educates readers as to why staffs exist, how they impact the Navy, and how they can offer both professional development and meaningful accomplishment.



Six-Legged Soldiers

by Jeffrey A. Lockwood

Recommended by: LT Thomas McGlynn, Entomologist

Summary: This is a fantastic novel depicting the role that insects have played in wars throughout human history. Insect-borne diseases have caused more casualties in war throughout human history than any other causes. This is a good read for anyone interested in the intersection of public health and military history.

RESERVE UPDATE

Sending Positive Thoughts & Well Wishes To CDR Francis “Tony” Goiran



Our Reserve Physician Assistant Specialty Leader, CDR Francis “Tony” Goiran, was diagnosed with throat cancer before the holidays and could not attend our Specialty Leader Business Meeting last February. He is undergoing treatment at the University of Carolina Cancer Center in Chapel Hill, N.C., and we have a short inspirational note from him to share:

I want to thank the many friends and family who have been sending me their well wishes and positive thoughts as I undergo my treatments for squamous cell carcinoma of the throat. It has certainly been a roller coaster of emotions and physical challenges for me these past several months but as each day passes, I know I am one step closer to recovery. I have been receiving wonderful care at the University of North Carolina Cancer Center in Chapel Hill for several months now and I could not be happier with their professionalism and the patient care that I have received. They have been doing their part, so I just need to continue to do my part though as I have mentioned it has been a roller coaster. My initial treatment involved a partial radical lymphadenectomy of the neck, followed by a Trans Oral Robotic Surgery (TORS) resection of the throat mass at the base of my tongue. Unfortunately, the post-surgical pathology report came back positive for cancer cells, so I have begun my radiation treatments, twice a day, five days a week, times five weeks which I have affectionately called “Radiation Camp.” UGH!! I can handle the treatments, but the side effects have been rough and doing something as simple as drinking water can be excruciatingly uncomfortable. But despite this bump in the road, I have been truly blessed. I have a wonderful wife who has been my Rock, while I continue to be the rolling stone. I have terrific friends and family who send me their kind words, laughter, and encouragement which has been greatly appreciated. And I have met some amazing people who have inspired me by their courage and positivity. Their smiles, their strength and love of life have been welcomed. So, I am lucky to be inspired by so many ... I am blessed!! I no longer sweat the small stuff because my life now involves counting calories, maintaining my fluids intake, getting rest, staying physically active and keeping a positive attitude. And every day I remind myself that I GOT THIS!! But I am not alone in this fight, I have my friends and family which reminds me of a great song, “Lean on Me” by Bill Withers. If you get a chance, play this song. Turn off the lights, close your eyes and just listen to the words. That is where I’m at and I’m at peace with life. I don’t have much to offer at the moment, but I can pay it back for all the kindness I have received and give you some smiles, laughter, and encouragement back in return. Here is my email francis.goiran@gmail.com so don’t hesitate to drop me a message. I would love to hear from you all. I also need to give a shoutout to DPC-RSU East for being so supportive throughout this whole ordeal. Once I am done with these treatments, I plan on returning to Camp Lejeune and getting back to work as soon as possible... Cancer ain’t going to stop me!! I GOT THIS!!



RESERVE UPDATE

Are you interested in transitioning out of Active Duty service? Have you thought of continuing your service as part of the Navy Reserves? Our Reserve community includes over 350 MSCs across 18 of the 31 MSC specialties who integrate seamlessly with our Active counterparts across the Navy enterprise. Contact the Reserve Affairs Officer, CAPT David Fabrizio, at david.i.fabrizio.mil@us.navy.mil to learn if the Reserves might be right for you!



Camp Pendleton, Calif. EMF Camp Pendleton Medical Laboratory Scientists take time out of a rigorous training schedule for a photo at NMRTC Camp Pendleton on 12 March 2023. These five Medical Laboratory Scientists represent 22 percent of the total Reserve Medical Laboratory Scientists population. Pictured left (L-R): LCDR Ester Do, Operations Officer for EMF Camp Pendleton as well as Med Lab Officer Assistant Specialty Leader; LT Tara Hall; LT Stephen Bishop; CAPT Luis Nunez, Commanding Officer of EMF Camp Pendleton; and LCDR Samson Adelaja.

Coronado, Calif. Reserve MSCs are shown participating in Exercise MA-KO SNETRY 23-2 from 30 March to 1 April 2023 at the Expeditionary Warfare Training Group, Pacific at Naval Amphibious Base Coronado. U.S. Pacific Fleet, C3F, and C7F tested the Maritime Operations Center construct to meet the Navy Reserve Fighting Instructions and to complete Joint Qualification Requirements. This was an excellent opportunity for U.S. Pacific Fleet, C3F, and C7F to execute Operational Planning Teams integrating with Reservists from SURFPAC, SUBPAC, and other subordinate commands such as Combined Naval Forces Korea. Pictured right (L-R): CDR Darren Kasai, POMI; CAPT(sel) Rudy Herrera, POMI; CDR Daniel Landry, Patient Administrator; and LCDR Fei Siu, Optometrist.





Falls Church, Va. A number of Reserve MSCs are assigned on Active Duty for Operational Support orders to Navy Reserve Policy and Integration (N1R) at the Defense Health Headquarters. N1R, which supports over 5,700 Navy Medicine Reservists and is a Code of Bureau of Medicine and Surgery (BUMED), is responsible as the principal advisory group to the Vice Chief, BUMED for Navy Reserve Medicine, and also as the principal advisor to the Chief of Navy Reserve for operational and medical readiness policies and issues relative to the Reserve Component. Pictured above (L-R): LCDR Kelly Mitzen, PA-C, Strategic Plans and Operations Officer; LCDR Prima Baines, HCA, Assistant Operations & Mobilization Sourcing Officer; LCDR Jacqueline Teixeira, HCA, Talent Initiatives Manager; HM1 Abdessamad Elgbouri, Manpower LPO; LT Ashlee Schmitt, OT, Reserve Training and Education Policy Analyst; and CAPT Louise Anderson, HCA, Deputy Director N1R.

SPECIALTY SPOTLIGHT

OPERATIONS RESEARCH ANALYSIS

By: LCDR Andrew Olson, Specialty Leader of Operations Research Analysis

The Operations Research Analysis (ORA) specialty had its origins in the study of military operations prior to WWII. It began when, having developed radar, British scientists were asked to create procedures for its use in an air defense system. This was research focused on operations and was a fundamentally new employment of the scientific method by scientific personnel.

In today's complex operating environment, the military uses ORA at the strategic, operational and tactical levels. ORA analysts cover a variety of topics, to include national policy

analysis, resource allocation, force composition and modernization, logistics, human resources, battle planning, military operations scheduling, intelligence, command and control, weapon selection, engagement tactics, maintenance and replenishment, and search and rescue. Therefore, ORA analysts effect a variety of issues and can be found in all communities — from the unrestricted line communities to the staff communities.

In Navy Medicine, there are two primary aspects of interest within the ORA field, (1) the management and

processing of data and (2) the analytical methods and theories for descriptive, predictive and prescriptive analysis, and optimization. The first aspect involves data systems and data preparation, including databases and warehousing, data cleaning and engineering, and some facets of data monitoring, reporting, and visualization. The latter aspect involves data analytics and includes data mining, text analytics, machine and statistical learning, probability theory, mathematical optimization, and visualization of results.



Falls Church, Va. Pictured above (L-R): LT Paul Heyliger, LCDR Stephen Cone, ENS Heather Lancellotti, and LCDR Karl Matlage represent four of the 10 Operations Research Analysis officers in the Medical Service Corps.

The request for ORA-trained personnel have primarily been at the headquarters level, such as the Chief of Naval Operations, the Bureau of Medicine and Surgery (BUMED), the Defense Health Agency (DHA), and research communities, such as the Naval Health Research Center (NHRC), and the Operational Test and Evaluation Force. Individual officers come to ORA from a variety of backgrounds spanning logistics, POMI, pharmacy, comptroller, industrial health, and general health care administration. With only 10 billets, community members will frequently bounce in and out of ORA billets and their previous specialties.

Having a strong mathematical background and training, the worth of ORA-trained personnel has been growing year after year with the growth of data science and machine learning. Many of today's ORA analysts, such as LT Ken Marler at NHRC, have expertise in cas-

ualty estimation and the Joint Medical Planning Tools. This is critical in assessing the medical requirements for the Combatant Commands, TRANSCOM, and the Joint Staff — especially in their development of the Joint Medical Estimate. Working with other communities, such as logisticians and POMIs, these casualty estimates drive the operational structure and quantity of many of the medical units, such as the Expeditionary Medical Units and En Route Care teams. Individuals at the headquarters level, such as LCDR Karl Matlage (BUMED) or LCDR Stephen Cone (DHA), analyze performance metrics, produce visualizations for senior

leaders, and help with data engineering. Their efforts directly affect the data-driven decision making by senior leadership.

As the specialty leader, it has been a privilege to work alongside some of the smartest people in Navy Medicine.

These ORA analysts have the ability to understand the military problem, to quantify ways to study and to understand the issues, to pursue complex means of providing solutions, and then to communicate effectively the way forward. Though small in quantity, I can't think of a better group that I would be in the room when faced with difficult decisions.



Washington, D.C. Pictured above: LCDR Andrew Olson, Specialty Leader of Operations Research Analysis, at OPNAV N81, Pentagon.



Monterey, Calif. Pictured left (L-R): LT Aaron Chamberlain and LCDR Joseph Cantwell, both Operations Research Analysts, stand outside the Dudley Knox Library at the Naval Postgraduate School.

I KNOW WHAT DETAILERS DO, BUT WHAT ARE PERS PLACEMENT OFFICERS?

Placement Officers are the liaison between Navy Personnel Command (PERS) and commands. They ensure all valid/funded billets on the authorized manning document (AMD) are filled, based on community manning levels and billet priority.

Detailer versus Placement Officer – Roles Defined:

The detailer is the officer's advocate and matches member with best duty station based on career progression, professional growth, billet diversity, rotation date, available billets and needs of the Navy. The detailer enters orders into the electronic order writing system, and orders are then vetted through multiple reviewers, including placement officers for the losing and gaining commands.



The losing command placement officer verifies that the member has met time on station and that a backfill has been identified. The gaining command placement officer ensures the member meets the requirements of the billet (i.e., correct designator, subspecialty, AQDs, etc.). If there are vacancies in higher priority areas (i.e. operational and overseas) those billets are filled first, while taking into consideration spouse co-location, Exceptional Family Member Program (EFMP), limited duty (LIMDU), and other pertinent professional and personal concerns.

So how do Placement Officers fit into the whole "orders" equation?

Placement Officers work directly with command leadership to ensure ships, staffs, and commands are adequately manned. Detailers work timing of permanent change of station (PCS) with gaining/losing personnel to ensure minimal billet gaps. The command makes the ultimate decision on the member's actual transfer date. Command concerns can be voiced to their placement officer who can then discuss concerns with the member's detailer. Your projected rotation date (PRD) is determined by the date you reported on board your current command and the PERS prescribed tour length for your billet (i.e., Sea Duty is two years, CONUS is 36 Months, and OCONUS tour length is determined by location and whether you went accompanied or unaccompanied). Extending beyond your PRD by a few months to allow a face-to-face turnover is rarely an issue but PCSing prior to your PRD requires a PERS flag prior to orders being authorized for release. Occasionally, commands are willing to gap a billet to accommodate an officer's unique situation. If a gap is acceptable, the member can inform their detailer and the command informs their placement officer to ensure everyone is aware.

The Takeaway:

Understanding roles and responsibilities of placement, detailer, command and constituent when negotiating and executing PCS moves is important to ensure clear communication and reduce frustration while delivering mission success. If you have any questions regarding your command's manning, you can discuss it with command leadership and, if needed, they will contact their placement officer. Your detailer works for you, the placement officer works for the command, and we all work together to retain talent and deliver mission success.

HRO SPOTLIGHT

AUDIOLOGY

By: CDR Jason Jones, Audiology Specialty Leader

LCDR Kyle Shepard, MSC, USN has exemplified the principles of a High Reliability Organization (HRO) while serving as the Helmet Systems and Auditory Performance Branch Head in the Human Systems Engineering Department of the Naval Air Warfare Center Aircraft Division Command for the past two years. Noise-induced hearing loss (NIHL) continues to be one of the most prevalent injuries in the military. Previous research has shown that personnel typically do not insert their universal fit foam earplugs correctly, thus resulting in very low noise attenuation and high risk for noise-induced hearing damage. It has been demonstrated that custom earplugs provide more consistent real-world attenuation than universal fit earplugs because they conform to ear anatomy and thus are much easier to insert correctly. The process for making custom earplugs, however, has historically been quite cumbersome. Ear impressions must be obtained using a low viscosity silicone injected into a person's ear canal by a trained medical professional. Once hardened, the impression is removed and mailed to a hearing protection manufacturer. The manufacturer takes a digital scan of the ear impression to produce a negative mold that is injected with an earplug material. Once the filled mold assembly cures, the earplug is removed, cleaned/polished, and shipped to the end user. The entire process can take six to 16 weeks or longer when there are errors. In addition to the logistical burden associated with the current earplug acquisition process, the physical impression process carries some safety risks. There is a risk of ear injury, such as "blow-by," where impression material bond with the eardrum, ear canal scratches that can bleed, and a high level of discomfort to the subject. LCDR Shepard has been instrumental in developing and executing research that will improve this process in a variety of ways.

Reluctance to Simplify:

Understanding the current process and the need for improvement, LCDR Shepard completed research validating 3D ear canal scanning technology capable of supplementing and/or replacing the physical impression process. His research has demonstrated many opportunities for the U.S. military. 3D scanning inherently decreases the logistical footprint of acquiring custom earplugs when compared to physical impressions, as scans can be immediately sent electronically to manufacturers, saving time and cost. 3D scanning reduces the discomfort and risk associated with physical impressions which can enable more professionals to be trained in completing scans outside of audiology. This will increase access to custom hearing protection. This technology also provides real time feedback to a user on depth of scan. Custom communication earplugs require a deep impression to achieve best performance of the plug in delivering a quality signal. 3D scanning offers real time feedback on depth of scan. Deep impressions, beyond the second bend of the ear canal, are difficult and uncomfortable to obtain using the physical impression method. These deep impressions are important to maximize fit for custom earplugs and are imperative for custom communication earplugs to maximize quality of the incoming speech signal. Therefore, 3D scanning allows users to obtain an impression deep more consistently in the ear canal. This technology has demonstrated many benefits while creating earplugs as effective as those created from the physical impression process.

Commitment to Resilience and Collaboration:

In pursuit of independent manufacturing of custom earplugs, LCDR Shepard analyzed current 3D printing operations across the military. It was found that Navy Dentistry is currently using 3D printers at various commands to create various products for their patients. In collaboration with the leaders of this process, LCDR Shepard has now created a project aimed at proving these same printers can be used to create custom earplugs from the 3D scanning technology that has already been validated. If data demonstrates earplugs created from these printers are as effective as other proven methods, this will offer a pathway to incorporate 3D printing of custom earplugs at commands that already have equipment, processes and personnel supporting 3D printing.



LCDR Kyle Shepard, MSC, USN

FROM THE LABS

RISK MODELING: TURNING BIG DATA INTO BIG IMPACT

By: LCDR Adam T. Biggs, Research Psychologist

It is not the size of the data that matters. It is how you use it.

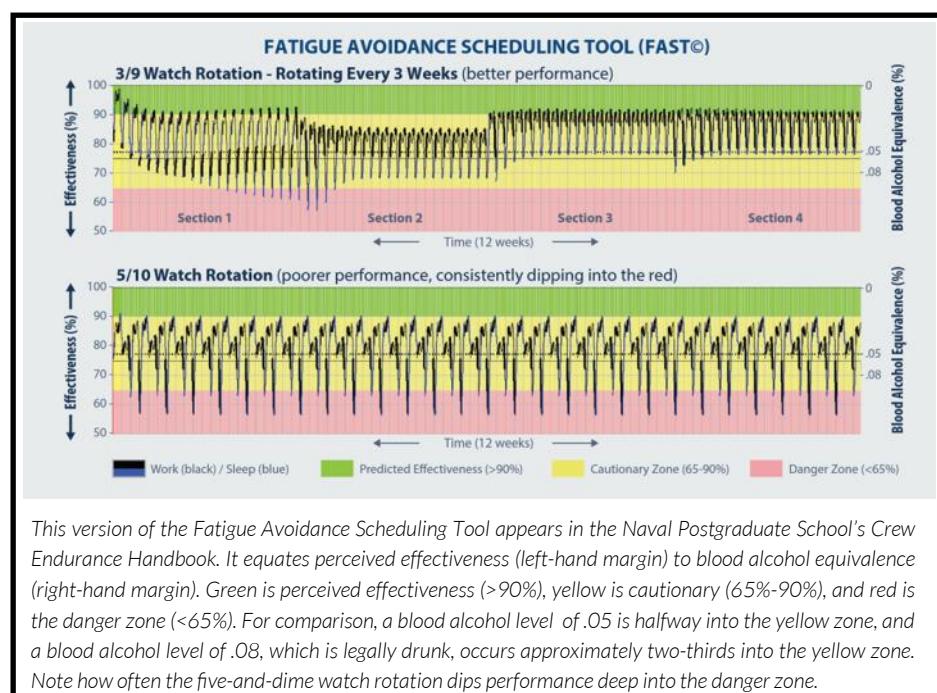
Navy Medicine has always engaged in “big data” collections and, indeed, the Medical Service Corps was founded in part to collect and to administer programs related to health care data. Still, the research world often endeavors to do more than collect data. A key contribution has always been novel methods for supporting operational risk decisions. That is, how are leaders making use of the research findings? Here we spotlight three instances where Navy researchers have contributed to new innovations in risk assessment, including: 1) fatigue management, 2) public health risk, and 3) small arms combat modeling.

Fatigue Management

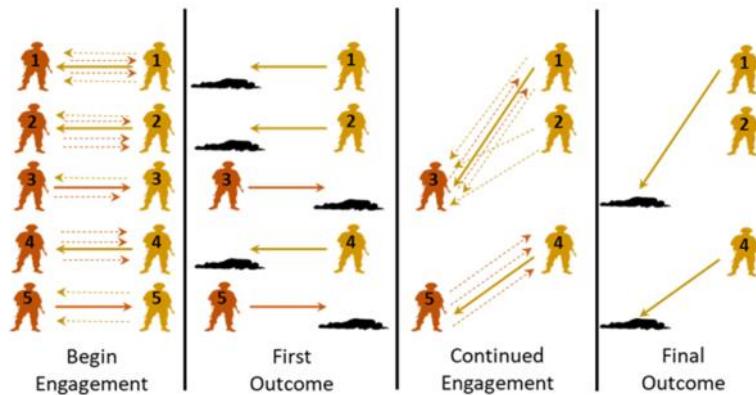
Sleep matters for performance as much as skill, yet for decades, the Navy implemented “five-and-dime” watchstanding schedules that effectively put people on a 30-hour day rather than a 24-hour day. Circadian misalignment received new attention and new interventions thanks to the Crew Endurance Program. Supported by the Naval Postgraduate School and many MSC officers over the decades, this program produced new tools for understanding sleep problems. The Surface Fleet is currently enhancing these tools further into the Optimized Watchbill Logistics tool and new wearables program. In short, medical research helped transform “sleep bad, performance bad” into optimized watch scheduling and new wearable monitoring that will inform commanders about the risks posed by insufficient sleep among their crews.

Public Health Risk

This point is immensely practical and could be summarized as a shoutout to the Navy and Marine Corps Public Health Center. During the COVID-19 pandemic, the office regularly tracked COVID information and sent updates to many Navy and Marine Corps commands. Medical officers would routinely use, manage, track, and more importantly, convert the information into a risk assessment for any areas with military bases. Commands relied upon this information for safety and risk assessment throughout the pandemic. Their efforts received special attention given the global impact of COVID-19, although their preventive medicine and related efforts are constantly protecting the fleet in real-time against emerging threats.



Small Arms Combat Modeling



Sample diagram of the SPEAR Small Arms Combat Modeling squad-level simulation. Marksmanship data provides means and standard deviations for speed and accuracy from each shooter. Then, hundreds of behaviors are simulated for each iteration to include target selection, first shots, subsequent shots, and weapons handling. These Monte Carlo simulations are run hundreds of thousands of times to convert behavioral observations of speed and accuracy from dozens of marksmanship drills into a quantifiable chance of winning a combat engagement..

If you have ever sat in a room listening to infantry Marines talk about marksmanship, you will gain a deeper understanding of the term “passionate debate.” However, marksmanship debates can be complicated to resolve. Speed and accuracy on different drills are not always easily compared. How does the combat marksmanship value of one-quarter second compare to a 10% change in accuracy? Data scientists from the Naval Health Research Center helped address this question through novel innovations in small arms com-

bat modeling. Table after table of means and standard deviations from dozens of marksmanship drills become filtered through a combat simulation technique that gives a simple answer: Squad A defeats Squad B 75% of the time and suffers nine casualties for the victory, four Killed in Action, and five wounded. Marksmanship data can be filtered through these models to make better decisions about training procedures, equipment, and even data quality. The “so what” becomes so obvious that it needs no clarification.

Research often focuses on collecting data for this project or that study. However, and especially for military research, sometimes the most important part of the research has nothing to do with the study. How people make risk assessments from the data can matter a whole lot more.

For more information, please see these resources:

Fatigue Management

Naval Postgraduate School Crew Endurance Program

<https://nps.edu/web/crewendurance>

Public Health Risk

Navy and Marine Corps Public Health Center Homepage

<https://www.med.navy.mil/Navy-Marine-Corps-Public-Health-Center/Pages/Home/>

Small Arms Combat Modeling

Simulating Lethality Through Human Performance Data: Success Story from Infantry Marksmanship Training. Journal of Defense Analytics and Logistics. (In press, link forthcoming)

ARTICLES OF INTEREST

U.S. NAVY GLOBAL HEALTH ENGAGEMENT IN- TERNATIONAL MARITIME EXERCISE—CUTLASS EXPRESS IMX/CE 23

By: LT Freddie Mawanay, Healthcare Administrator

Global Health Engagement (GHE) is a security cooperation tool that enables interaction between U.S. Naval Forces Central Command (NAVCENT) and regional partners' armed forces to enhance relationship and to achieve interoperability through health-related activities. NAVCENT's International Maritime Exercise (IMX), combined with Cutlass Express (CE), is the largest maritime exercise in the Middle East region. The combined exercise included 7,000 personnel, 35 ships, and more than 30 unmanned and artificial intelligence systems. IMX/CE 23 provided a platform for GHE to significantly contribute to the Commander's Intent, achieving multinational interoperability while operationalizing NAVCENT's first-ever combat casualty care course in the CENTCOM AOR and integrating unmanned systems to conduct a patient movement in the Red Sea. To accomplish this success, NAVCENT collaborated with the Defense Medical Readiness and Training Institute in San Antonio, Texas, and Task Force 59 to employ a T-38 USV. The integration of Naval Reserves into GHE serials and augmenting medical capabilities on naval ships provided real-world emergency care to all participants.



Aqaba, Jordan. The combat casualty care course was held at the Royal Jordanian Naval Base in support of NAVCENT's International Maritime Exercise (IMX) 23 from 12 to 14 March 2023. Pictured above (L-R): Mr. Ernest Barner, Advisor, MEDCOE; LT Freddie Mawanay, HCA/NAVCENT Health Security Cooperation Officer; CAPT Miguel Cubano, NAVCENT Force Surgeon; HMCS Matthew Watton, HMC Tyson Hammond, and HM2 Fernando Guzman, all NAVCENT TC3 Instructors; CAPT Jack Tsao, NAVCENT Medical Reserve CO; HM1 John Sinclair, HM1 Ndudi Chukwudozie, and HM1 Emilio Molina-Picado, all USNR Medical; 24 surgeons/physicians from Bahrain, Israel, Jordan, United Kingdom, Philippines, Brazil, Djibouti, and Kazakhstan; and MSgt Douglas Rozelle and HM2 Gregory Donaldson, both DMRTI C4 Instructors.



Aqaba, Jordan. Pictured left: LT Freddie Mawanay, HCA/NAVCENT Health Security Cooperation Officer, led the development, planning, and execution of global health engagements and health service support plan in support of NAVCENT's International Maritime Exercise (IMX) 23, the largest maritime exercise in the Middle East. He leveraged human and technology capabilities that operationalized NAVCENT's first-ever patient movement via T-38 USV in the Red Sea. He also pioneered, through collaboration with the Defense Medical Readiness and Training Institute, the first-ever combat casualty care course concept in the CENTCOM AOR.

THE NAVY'S NEW HEARING PROTECTION: MADE-TO-MEASURE FOR EVERY SAILOR

By: Brittany Dickerson, NAWCAD Public Affairs Specialist

Naval aviation now has a better solution to the Defense Department's most reported injury — noise-induced hearing loss — thanks to research and development at the Naval Air Warfare Center Aircraft Division (NAWCAD).

By utilizing digital-imaging technology, NAWCAD is developing a novel process to fit and to provide service members custom hearing protection more efficiently and with less risk. The improved process is safer than today's current process — which uses silicone injections — and will cut delivery time by at least 50%.

"Hearing damage is a readiness issue, but earns less attention because it is invisible and happens gradually over time," said LCDR Kyle Shepard, NAWCAD's resident audiologist and research lead. "Service members can compensate with hearing loss until one day they struggle to communicate from the cockpit or maintain situational awareness on the flight line or battlefield — we want to prevent that."

Hearing damage affects at least 10% of the military according to data from the Navy and Marine Corps Public Health Center. Tinnitus and hearing loss are the U.S. military's first and second most reported disability. Using imaging scanners and 3D printers, the improved process can provide the opportunity to quickly fit any service member with custom hearing protection.

"Several large medical commands are already using 3D printers with biomedical materials," LCDR Shepard said. "The missing pieces are a digital ear scanner and imaging software to make custom hearing protection in-house." To continue reading click [here](#).



Patuxent River, Md. Pictured above: LCDR Kyle Shepard, resident audiologist and researcher at the Naval Air Warfare Center Aircraft Division, demonstrates audio testing in an anechoic chamber at Naval Air Station Patuxent River. The aeromedical officer led research that proved the Navy could use digital scanning technology and 3D printers to produce custom hearing protection in-house to address hearing damage found in service members. Hearing damage affects at least 10% of the military according to data from the Navy and Marine Corps Public Health Center. (U.S. Navy photo by Todd Frantom)



Patuxent River, Md. Pictured above: LCDR Kyle Shepard, resident audiologist and researcher at the Naval Air Warfare Center Aircraft Division, describes a simple process for the Navy to print custom ear plugs for its sailors using a digital ear scanner and 3D printer to Navy Surgeon General RADM Bruce Gillingham and Force Master Chief Michael J. Roberts at Naval Air Station Patuxent River. (U.S. Navy photo by Todd Frantom)

STRATEGIC GOAL GROUP

MSC FY 23-28 STRATEGY MAP

During the February 2023 Specialty Leader Business Meeting, the Specialty Leaders and Assistant Specialty Leaders participated in breakout sessions to define the Medical Service Corps' strategic direction. One of the 2023 Specialty Leader Business Meeting's goals included codifying the MSC Strategy for FY23 and FY24 and organizing priorities under three key categories: Ready, Aligned, and Diverse.

This strategy map will guide our process as we continue to refine our goals and objectives. In addition to our current Strategic Goal Groups (SGG), Specialty and Assistant Specialty leader champions are leaning forward to support additional lines of effort to ensure our MSCs have the knowledge, tools, resources, and opportunities to enhance readiness, professional development, and career success.

Thank you to all of our current Strategic Goal Group leads and members for their continued efforts to support our Corps.

Keep an eye out in the Rudder SGG for additional information and opportunities for you to support your Corps.

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Strategic Environment	
<p>America's security environment is defined by an erosion of credible military deterrence, increasingly aggressive Chinese and Russian behavior, and an accelerating pace of technological change and expanding impact of the information environment.</p>	<p>The cornerstone of the 2022 National Defense Strategy is to strengthen integrated deterrence by leveraging the Joint Force's combined capabilities in all domains – in concert with our allies, partners, and entire U.S. Government – to make the costs of aggression against our vital national interests prohibitive.</p>
<p>The U.S. Navy will build, maintain, train, and equip a combat-credible, dominant naval force to keep the sea lanes open and free, deter conflict, and when called upon, decisively win our nation's wars.</p>	
<p>The Medical Service Corps plays a pivotal role in specialties to Navy and Marine Corps commands, square combat operations, disaster relief, and humanitarian assistance.</p>	
<p>The Medical Service Corps comprises the highest level of medical professionals who are operationally ready to meet the medical needs of the nation.</p>	
<p>Ready</p> <p>Medical Service Corps officers are trained and resourced subject matter experts prepared to support and communicate validated knowledge, skills, and abilities across the spectrum of operational medicine.</p>	



Navy Medicine Medical Service Corps FY23-28 Strategy Map

Mission

Looking Ahead for the Medical Service Corps

Navy Medicine embraces Get Real Get Better and a learning mindset to achieve the CNO's priorities and to sustain a culture of excellence. Navy leaders self-assess, "embrace the red," and use high reliability principles to deliberately self-correct to shift from more activity to better outcomes to achieve strategic goals.

A comprehensive manpower review and human capital-career pathway strategy will improve the flexibility to shape the force to meet future demands.

MSC promotes, develops, and sustains an enterprise-wide cultural mindset change and dedicated support from legacy missions to future operational requirements.

in providing world-class operational medical services and support through 31 squadrons, battalions, and units. Medical Service Corps officers deploy in support of an assistance missions providing the best care our nation can offer ashore and afloat.

Vision

level of professional and diverse administrators, clinicians, and scientists who are warfighting requirements at any time in any environment.

Strategic Priorities

Aligned

Medical Service Corps is fully integrated and synchronized with Navy Medicine and the Health Agency priorities in all areas of responsibility.

Diverse

The Medical Service Corps comprises agile, adaptive experts of diverse skill, thought, and experiences who value MSC heritage and values and share connection of purpose moving towards the future.

MSCs IN FOCUS



Norfolk, Va. Pictured left (L-R): RDML Matthew Case, Naval Medical Forces Atlantic Commander and DHA Tide-water Market Director, presents a Navy and Marine Corps Commendation Medal to LTJG Aimee Granger, a Healthcare Administrator with Expeditionary Medical Unit (EMU) Rota 14, during a ceremony at the Navy Lodge on 11 April 2023. LTJG Granger, a native of Falcon, Colo., was recognized for administering lifesaving cardiopulmonary resuscitation and applying an automated external defibrillator on an unconscious civilian participant during a local off-base exercise class. Through her rapid intervention and emergency response, the person was stabilized until ambulatory services arrived on the scene. (U.S. Navy photo by LT Brian Gluckman)

Red Sea. Pictured right: A training mannequin is used to simulate the medical evacuation (MEDEVAC) of a critical patient from an underway surface ship to Role 2 Light expeditionary medical facility utilizing an unmanned surface vehicle (T-38) during the U.S. Naval Forces Central Command's International Maritime Exercise (IMX) 23.





Joint Base Pearl Harbor-Hickam, Hawaii. Medical Service Corps officers address the blood supply in the AOR at an INDO-PACOM Joint Blood Planning Workshop held 13-17 March 2023. Pictured above (L-R): LT Akakposa Ananou, Medical Laboratory Scientist (MLS), Specialist Blood Bank (SBB); LCDR Rannie Gibson, MARFORPAC MEDLOG Planner; LT Timothy Hopkins, MLS, SBB, 2d Med Bn; LT Michelle Dorman, MLS, SBB, 3d Med Bn; CAPT Les Riggs, MLS, SBB, Division Chief ASBP; LT Ken Frati, MLS, SBB, 2d Med Bn; LCDR Fae Ramirez, MLS, SBB, ASBP Okinawa; CDR Colleen Cordrick, MLS, SBB, DHA; LT Apolinar Ortiz, MLS, SBB, NMRTC Guam; LCDR Michael Collins, MLS, SBB, NMRTC Great Lakes; and LCDR Alexander Alba, Emergency Medicine PA, 1st Marine Division.



Las Vegas, Nev. Pictured left: LT Julius Wiseman III, a Healthcare Administrator, was recognized at the 2023 Business Elite's 40 Under 40 Award Ceremony and Gala held at the Bellagio Hotel on 1 March 2023. Business Elite's "40 Under 40" is a prestigious award program that identifies outstanding young Executives and Entrepreneurs in the world's business and creates networking opportunities for up-and-comers, according to its website.

NATO-RAMSTEIN AEROSPACE MEDICINE SUMMIT



Garmisch, Germany. Pictured left (L-R): LCDR Brennan Cox, Aerospace Experimental Psychologist; LCDR Adam Preston, Aerospace Optometrist; LT Alexandra Kaplan, Aerospace Experimental Psychologist; and LCDR Micah Kinney, Aerospace Optometrist, are recognized for organizing an international operational vision panel covering topics including laser threats, laser eye protection and color vision, keratoconus in aviation, and progressive addition lenses (PALs) in drone operators at the 16th annual NATO-Ramstein Aerospace Medicine Summit (NATO-RAMS). The event, organized by the STO Human Factors and Medicine (HFM) Panel, was held on 21-24 March 2023. Held under the theme of "Accelerate Exchange," the Technical Course (HFM-364) covered the latest knowledge and practices in aerospace medicine and evaluated new and emerging technologies within the field. It also addressed current and future challenges in deployed area and multinational environments, with a focus on operational aviation medicine. The event brought together 178 participants from 15 NATO nations, as well as representatives from Sweden, Finland, Ireland, and India (pictured below).



SPECIAL RECOGNITION

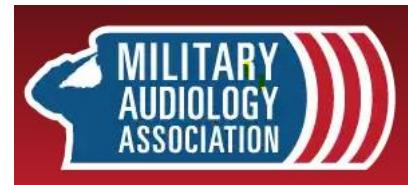
MILITARY AUDIOLOGY ASSOCIATION

AWARD WINNERS



Las Vegas, Nev. Pictured left (L-R): LT AJ. Litwinchuk, LCDR Krystal Rapp, and CDR Joel Bealer, all of whom are audiologists, are shown attending the Joint Defense Veteran's Audiology Conference held 6-8 March 2023.

Membership in the Military Audiology Association (MAA) is open to active duty personnel, Federal civilians, the Reserve Component, and Federal retirees who are duly certified audiologists or graduates of an accredited college or university and working in the field of audiology or hearing science. To learn more about the association, click [here](#).



LT AJ Litwinchuk was awarded the Elizabeth Guild Award (DoD Junior Audiologist of the Year Award). The Elizabeth Guild Award (DoD Junior Audiologist of the Year Award) is presented to a current MAA member who has demonstrated outstanding service to the professional areas of audiology and/or hearing conservation. The award commemorates particularly difficult times for audiology and hearing conservation in the early years.

LCDR Krystal Rapp was awarded the Donald C. Gasaway Award (DoD Mid-Career Audiologist of the Year Award). The Donald C. Gasaway Award (DoD Mid-Career Audiologist of the Year Award) is presented to a current MAA member who has displayed great passion and innovation in the field of hearing conservation. This commitment to the prevention of noise induced hearing loss should consider inspiring contributions in research, operational application, and mentorship.

CDR Joel Bealer was awarded the Doug Ohlin Founder's Award (DoD Senior Audiologist of the Year Award). The Doug Ohlin Founder's Award (DoD Senior Audiologist of the Year Award) is presented to the current MAA member for overall excellence as a notable contributor to the advancement of professional issues related to audiology, hearing conservation, or hearing science.

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The Medical Service Corps supports Navy Medicine's readiness and health benefits mission. It is the most diverse Officer Corps in Navy Medicine with 31 specialties organized under three major categories: Healthcare Administrators, Clinical Care Specialties, and Healthcare Scientists. There are over 3,000 active and reserve MSC Officers that serve at Military Treatment Facilities, on ships, with the Fleet Marine Force, with Seabee and special warfare units, in research centers and laboratories, in a myriad of staff positions with the Navy and Marine Corps, and with our sister services around the world.



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